

and undoing the screws 40. The legs 24, 26 and 28 can also be removed from their respective housings. After this disassembly, the various individual components will now be: the bar portion 30, the bar portion 32, the L-shaped rear portion 38, the connector 34, and the legs 24, 26 and 28. These various components can be arranged in a compact fashion for storage and/or transport.

IN THE CLAIMS

Please amend claims 13, 16, 22 and 26 as follows. A marked-up of the changes made to the claims below are submitted herewith.

Please cancel claims 1 and 19 without prejudice or disclaimer.

2. (Amended) An apparatus according to claim 13, wherein said first radiation source and said first detector are located in a first sender/detector unit, and wherein said second radiation source and said second detector are located in a second sender/detector unit.

3. (Amended) An apparatus according to claim 13, wherein said first reflector and second reflector comprise first and second retro-reflective matrix units, respectively.

12. (Amended) An apparatus according to claim 13, wherein each said radiation source is a laser beam source.

13. (Amended) An apparatus for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, the apparatus comprising:

- a first radiation source that emits radiation arranged at a first side of the vehicle path;
- a first reflector arranged on a second, opposite side of the vehicle path from said first radiation source that reflects radiation emitted from said first radiation source back towards the first side of the vehicle path;
- a first detector arranged at the first side of the vehicle path that receives the reflected radiation from said first reflector and detects a presence and absence of the reflected radiation;
- a second radiation source that emits radiation arranged at the first side of the vehicle path;
- a second reflector arranged on the second, opposite side of the vehicle path from said second radiation source that reflects radiation emitted from said second radiation source back towards the first side of the vehicle path;
- a second detector arranged at the first side of the vehicle path that receives the reflected radiation from said second reflector and detects a presence and absence of the reflected radiation; and
- a controller operatively connected to said first and second detectors that calculates at least one of the speed and acceleration of the vehicle in response to said first and second detectors

wherein each said radiation source is a modulated laser beam source.

15. (Twice Amended) An apparatus according to claim 13, further comprising a tilt sensor that measures a tilt of the vehicle path relative to a level path, wherein said controller determines a Vehicle Specific Power of the vehicle due to calculated acceleration and measured tilt.

16. (Twice Amended) An apparatus for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, the apparatus comprising:

first radiation means for emitting radiation arranged at a first side of the vehicle path;

first reflector means arranged on a second, opposite side of the vehicle path from said first radiation means for reflecting radiation emitted from said first radiation means back towards the first side of the vehicle path;

first detector means arranged at the first side of the vehicle path that receives the reflected radiation from said first reflector means for detecting a presence or absence of the reflected radiation;

second radiation means for emitting radiation arranged at the first side of the vehicle path;

second reflector means arranged on the second, opposite side of the vehicle path from said second radiation means for reflecting radiation emitted from said second radiation means back towards the first side of the vehicle path;

second detector means arranged at the first side of the vehicle path that receives the reflected radiation from said second reflector means for detecting a presence or absence of the reflected radiation; and

calculating means operatively connected to said first and second detectors, for calculating at least one of the speed and acceleration of the vehicle in response to said first and second detectors;

wherein each of said radiation means comprises means for modulating radiation to emit a modulated beam.

17. (Twice Amended) A method according to claim 16, wherein the first and second radiation and detector means are each affixed to a permanent installation on the side of the roadway.

18. (Twice Amended) A method according to claim 16, wherein a first and second reflector means are each affixed to a permanent installation on the side of the roadway.

21. (Amended) A method according to claim 22, wherein the emitting step includes emitting a laser beam.

22. (Amended) A method for measuring at least one of a speed and acceleration of a vehicle traveling on a vehicle path, comprising the steps of:

emitting radiation from a first side of the vehicle path;

reflecting radiation emitted from said radiation emitting step at a second,
opposite side of the vehicle path back towards the first side of the vehicle path;

receiving at the first side of the vehicle path the reflected radiation from the
reflecting step;

detecting a presence or absence of the reflected radiation; and

calculating at least one of the speed and acceleration of the vehicle in
response to the detecting step;

wherein the emitting step comprises the step of modulating radiation to emit
a modulated beam.

24. (Amended) A method according to claim 22, wherein the reflecting step
includes reflecting using a retro-reflective matrix unit.

25. (Twice Amended) A method according to claim 22, further comprising the
steps of:

measuring a tilt of the vehicle path relative to a level path; and

determining a Vehicle Specific Power of the vehicle due to the calculated
acceleration based in part on the measured tilt.

26. (Twice Amended) An apparatus for measuring at least one of a speed and
acceleration of a vehicle traveling on a vehicle path, comprising: